

6 October 1955

MEMORANDUM FOR: Commander, Air Weather Service

SUBJECT : Air Weather Service Support to CIA Project

PROBLEM

1. The selection of a method of providing Air Weather Service support to Project AQUATONE.

FACTORS

2. Following are pertinent factors:

a. The Project will be composed of the following elements:

- | | |
|----------------------|------------------|
| (1) Headquarters | Washington, D.C. |
| (2) Training Base | |
| (3) CIA Detachment A | |
| (4) CIA Detachment B | |
| (5) CIA Detachment C | |

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b. Elements of these detachments will operate from staging bases at

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c. Rapid transmissions of weather forecasts will be provided by the CIA. Estimated transmission times are indicated by Tab "A".

d. Air Weather Service support will be required for the training and active operational phases of the Project.

e. Timing of operations:

- | | |
|-----------------------------|-----------------------|
| (1) Training | Begin 1 December 1955 |
| (2) Active operations Det A | Begin 1 March 1956 |
| (3) Active operations Det B | Begin 1 May 1956 |
| (4) Active operations Det C | Begin 1 July 1956 |

f. Time limitations imposed by:

- (1) Nearness of beginning of training phase.

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(2) Time required to secure and clear personnel for the Project.

g. Extreme sensitivity of Project requires minimum number of people be indoctrinated.

h. Personnel cost to Air Weather Service. Tab "B".

i. Scope of the forecasting problem and the extreme importance of a high quality product. Tab "C" lists forecast requirements.

j. Availability and speed of receipt of basic data.

ASSUMPTIONS

3. The following assumptions apply:

a. Sufficient high level data can be secured from the USSR to allow a creditable job of forecasting.

b. If assumption "a" proves erroneous, I assume we can adapt work up procedures to produce sufficiently accurate high level forecasts to be of value to the Project.

DISCUSSION

4. The scope of the forecast problem and the fact that five to seven elements of this Project will require forecasts simultaneously are primary governing factors in the organization of the weather units to support this Project. Second in importance are the communications which are available. These are of two distinct types. First are those concerned with weather data. Primary communications facilities for weather data are available at each Weather Central in the States and overseas. Second are the facilities available for disseminating forecasts. Rapid facilities for disseminating weather forecasts securely will be provided by the CIA. Next, the need for an extremely high quality product is obvious. The necessity for each aircraft to return to its home base in [REDACTED] during the training phase is extremely important for security reasons. The same situation is applicable to the overseas operations. The sortie rate overseas will be limited by the availability of aircraft and pilots. A mission which proves worthless due to an erroneous forecast of cloud cover is irretrievably lost as the capability is limited. I recognize AWS resources are limited. Thus, my basic thoughts have been concerned with the method of providing optimum quality and service balanced against the estimated cost to the Air Weather Service.

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5. The method which I believe would provide the maximum quality product is that of placing a weather unit at each operating location fully capable of forecasting for all levels of the USSR. Such units would be supported by theater weather centrals for areas outside the USSR through their standard facsimile broadcasts. I have estimated the cost of this program as 200 to 225 AWS people. This does not include the communications augmentation for basic data required for each home base. This prohibitive personnel cost eliminates serious consideration of this method. The second approach is that of providing minimum supplementation to weather stations at each home base backed up by the theater weather centrals and the USAF weather central for the Project Headquarters in Washington. Under this assumption, the weather unit in [REDACTED] would be self sufficient. Centrals would provide all planning and operational forecasts for winds, turbulence, and high level visibility for overseas units. They would also provide all planning forecasts of other meteorological elements issued prior to 6 hours before take off. The local detachment would provide last minute checks of cloud cover and inflight advice. I believe this would provide approximately the same quality product as the first method but with a slight delay in communications. A very great problem is created however. This is the method of providing effective coordination with and operational control of the supporting weather centrals. These centrals would be physically removed from any unit of the Project or any responsible person with whom to effect necessary coordination. The estimated cost of this method is provided in Tab "B".

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The third approach is that of providing minimum supplementation to the weather stations at each home base and at the [REDACTED] Site with all upper air and planning forecasts issued by the USAF Weather Central. The overseas weather stations would provide cloud cover forecasts for periods of less than six hours before take off assisted by advisory forecasts from the central. This solves the operational control and coordination problems as the Project Officer of Air Weather Service and the Staff Weather Officer of Project Headquarters are readily available. It also affords maximum security, flexibility, and is the most economical. In addition, I believe the quality of work done at the USAF weather central equals or exceeds that of any other weather central. This method creates a communications problem. However, this problem is confined to the availability of incoming weather data. Eighty-five percent of the USSR surface reports for accepted synoptic times are available in the USAF Central within six hours, sixty percent within four hours. I estimate this to be three hours later than the availability of similar data at Weather Centrals overseas. I believe that the experience of personnel of the USAF Weather Central, the improved coordination afforded and the presence of forecasting capability at the home base, compensates for the disadvantage of the time delay.

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CONCLUSIONS

6. From a critical analysis of the discussion in paragraph 5 above, I consider:

- a. Weather Central concept should be utilized.
- b. Weather Central support responsibility should be assigned the USAF Weather Central.

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c. Base weather stations at [REDACTED] and at the home bases should be augmented by the minimum number of people to enable them to acquire short period low level forecasting capability for their respective areas.

d. Weather central forecasts should be disseminated through CIA communications channels for secure and rapid transmission. CIA communications personnel have stated they are willing to establish a point to point secure land line teletype from any locality in the Washington area to their Signal Center.

ACTION RECOMMENDED

7. In view of the conclusions listed in paragraph 6 above, I recommend:

a. That the 9th Weather Group be directed to provide weather central support through the USAF Weather Central.

b. That a limited forecasting capability be provided at each home base and at the training base.

c. The following personnel figures be approved:

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- (1) [REDACTED] Test Site - 8 Subprofessional, 7 Professional. (Ref Tab "B")
- (2) USAF Weather Central - 19 Subprofessional, 24 Professional. (Ref Tab "B")
- (3) Augmentation to Base Weather Station at each home base.
 - (a) Det A - 3 Subprofessional, 3 Professional.
 - (b) Det B - 3 Subprofessional, 3 Professional.
 - (c) Det C - 3 Subprofessional, 3 Professional.

d. That the Air Weather Service Project Officer be directed to effect necessary coordination with:

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- (1) Staff Agencies of Headquarters, Air Weather Service.
- (2) Commanders of appropriate Air Weather Service Commands.
- (3) The Staff Weather Officer of the CIA Project Headquarters.

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Lt Colonel, USAF

TABS:

- A - Communication Time Study
- B - AWS Personnel Cost Study
 - Part 1
 - Part 2
- C - Forecast Requirements

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